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YOUR SEARCH REQUEST AT THE TIME THIS MAIL-IT WAS REQUESTED:
LANDSCAP! W/10 (PLAN OR BLUEPRINT) W/10 (SYMBOL! OR GRAPHIC!)

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HEADLINE: AEC/CAD moves outside; architectural, engineering and construction/computer-aided design; landscape architects use specialized software for computer-aided design

BYLINE: Mahoney, Diana Phillips

BODY:

Landscape architects look to specialized software to reap the benefits of traditional CAD

From a simple rock garden in the front yard of a private residence to an 18-hole golf course in a resort community to a supermarket parking lot, the phrase "landscape architecture" refers to just about anything outside of a building or structure.

Generally, the responsibilities of a ~~landscape architect~~ revolve around the development of a comprehensive site plan and design, including specifications for such factors as topography, hills, grades, planting, irrigation, walkways, and parking. (The more "invisible" outdoor aspects of a project, such as sewers, underground and overhead utilities, and easements, typically are considered to be the province of civil engineers.)

With an application base of such breadth, one would expect an onslaught of AEC/CAD vendors scurrying to establish their position in the market. Such an assumption, however, is unfounded, as currently there are only a handful of automated design products geared specifically toward the landscape architecture trade.

This lack of attention is particularly surprising, considering how amenable the tasks of a landscape architect are to automation. The design and drafting of site and planting plans require, for instance, significant repetition, because images such as trees, curbing, and walkways occur frequently throughout a drawing. Image manipulation, resulting from client edits and subsequent redesigns, also consumes much of a landscape architect's time, as do ongoing analyses of such data as slope, elevation, and water flow to meet aesthetic, geographic, and legislative objectives. In addition, map overlays, site volume calculations, cost estimations, coordinate geometry (for road alignments, for example), vegetation growth approximation, irrigation design, and labeling constitute other potentially CAD-friendly tasks.

Realizing the advantages that AEC/CAD could bring to his landscape architecture business, Michael Verson of Knoxville, Tennessee-based Verson and Associates adopted the technology six years ago by purchasing Landcadd, an Autocad-based software program from Landcadd International (Franktown, CO).

Claiming to be one of the earliest adopters of ~~CAD for landscape architecture~~ and one of the first in the US to use Landcadd, Verson chose the package "because I knew Autocad was a program that would grow with me." And it has, he says, whether it be for use in land planning activities for parks and recreation projects, site planning work for institutions (college campuses and hospitals, for example), or designing rooftop gardens.

The core of Landcadd is its "Site Planning and Landscape Design" module, which allows users to execute all phases of site planning and design. The application includes designs for roofs, parking lots, roads, walks, and walls, and more than 800 symbols--available in plan, elevation, and 3D views--including those for sports facilities, playground equipment, lighting fixtures, utility lines, ground cover, shrubs, trees, people, and cars.

Other Landcadd modules include a construction detailer, a digital terrain modeler, a data analysis tool, a plant database and growth simulator, an irrigation design tool, a site volume calculator, a plan and profile generator, and a cost estimator. Each of the modules is independent from the others so that users can purchase only those pieces appropriate to their needs.

From Verson's perspective, Landcadd's only deficiency is its inability to generate realistic 3D images. "Wireframes and shading stuff is OK, but then you have to switch over to other packages. I'd like to have one package that would carry all of the way through the design and rendering process."

A willingness to incorporate other programs, on the other hand, can result in some pretty impressive 3D presentations. At the Elite Landscape Design Company in Bakersfield, California, designers import video views of a proposed site into Videocad from Mathematica (Lakeland, FL). With Autoshade capabilities (accessible through Videocad's ADI driver), they render traced-over video images that have been merged with conceptual designs developed in Landcadd. Another company, the Lombard North Group of Victoria, British Columbia, combined the digital terrain modeling capabilities of Landcadd with Autodesk's 3D Studio and Animator Pro to design a photo-realistic fly-through of a waterfront park in Kelowna, British Columbia. According to many users, however, such ambitious projects as these tend to be exceptions to the rule. Impending deadlines, long learning curves, and added expense preclude, for the most part, such extravagance.

Nevertheless, most CAD-reliant landscape architects, such as Peter Collins, president of Digital Site Planning of North Bay, Ontario, appreciate the advantages that less-flashy applications of the technology afford them.

According to Collins, the use of 3D imagery in his site plans--which he creates in the landscape module of the Autocad-based Landscape Designer Series from Softdesk (Henniker, NH)--at first "blows away" his clients, "because, generally speaking, they're not used to seeing 3D trees on plans. But they like it. They can pick up on things a lot easier. They'll say, 'Oh, I understand what you're talking about now,' and that's a definite bonus."

Citing the similarities between Softdesk's product--which also consists of several independent modules--and Landcadd, Collins reports that, at the time he was researching his purchase decision, "It was pretty much a toss-up between the two. I decided to go with Softdesk because a lot of the architects and engineers I work with use Softdesk."

This reasoning represents a significant consideration for landscape architects because these professionals typically work as subcontractors to architects and often in conjunction with civil engineers. Therefore, the ability to pass documents easily among the various interests is crucial to reaping CAD's potential time- and cost-efficiency benefits--particularly as the tasks delegated to each discipline begin to overlap. (For example, an architect may not only design a building but decide to put it on a site and layout where all of the drives and parking areas will go--functions that typically fall into a landscape architect's realm of responsibility. And, while in some cases the formal site plan is the responsibility of the landscape architect, some cities require that the documentation be prepared and "stamped" by a civil engineer.)

Fortunately, with the advent of data translation programs, software compatibility usually represents less of an obstacle than it might have five or six years ago.

According to landscape architect and self-proclaimed Macintosh evangelist James Santiago, president of Santiago and Associates of Ft. Lauderdale, Florida, "A lot of clients will give me Autocad DXF files. We take those files and port them into Powerdraw a Mac-based 2D CADD program from Engineered Software of Greensboro, North Carolina with the translator and draw in that." This process, says Santiago, "works very well. It's only with about one in 20 files that we may have a little problem, but it's never a problem that stops us; it's usually one that just takes an extra step."

One annoying glitch, says Santiago, is that some files are just too big. "Intergraph can make some incredibly big files that can't even come over on a disc. So we have to get the client to take it to Microstation, create a DXF file, go from there to Autocad, then from Autocad to us." Inevitably, the resulting file will be a stripped-down version of the original.

However, even this beats the pre-DXF translation days when, says Santiago, "Everybody was using Autocad, so I was tracing all of my clients' base data into the computer. At first I was manually reproducing it; then when I got a

scanner, I scanned in reductions of the work and traced it as a layer when that kind of program became available." Despite the extra work at the time, Santiago's commitment to the Macintosh as a design tool never faltered. "I even sold systems for a while. I figured that if I could make clients into 'Mac people,' I had my file and that would cut hours off a project--maybe 30 hours off a 20-acre shopping center."

Choosing the Mac over the MS-DOS platform was an instinctive decision, says Santiago, based on the hand-to-eye flexibility provided by the former. "Although it's still not the same as drawing manually, the Mac programs--we started with the first Mac, graduating from MacDraw and MacPaint to MacDraft to Powerdraw--come closer to any DOS-world CAD package." He adds: "Anybody can do generic drawing lines. It's how well you implement the interface that lets you put objects on the screen and alter them that's important."

Although Powercad is not a landscape design package per se, Santiago relies on it (and especially its **landscape** library extension, which provides **symbols** that can be used in either elevation or plan view) "for all of our projects: schools, churches, public buildings, courthouses, and so forth."

In addition, Santiago contends that a separate landscape package is unnecessary, particularly considering the "large-scale" nature of his company's work. "We probably have more in common with architects who design large buildings than does the architect designing a single-family home, because the first guy does repetitive work on every floor, or derives one floor from the next. With the little guy, everything is unique. In commercial landscape projects, we draw a lot of circles on the screen and name them, but they don't look different from the next."

Typically, in the name of expediency, the images in Santiago's landscape/irrigation plans are intentionally simplistic (trees are shown by circles with an X in the center--a common representation in the field), but he will use more sophisticated pictures in presenting ideas. "We do a lot of color plan work for presentation to the city council, for example. Sometimes we've gone nuts, like somebody has sat down and drawn a very elaborate tree that might contain 200 elements. Drawing a thing like that--even if you're using the fastest machine in the office, with the color turned off--can take hours longer than it took to lay down all the trees as circles in the first place."

Beyond the initial drawing time, adds Santiago, using such illustrative drawings is not practical with landscape plans because such documents may require the placement of hundreds of trees. "To redraw a whole sheet every time you make a move across a page--unless you're running a Mac Quadra 950 or something--is highly uneconomical.

"So, for a city council presentation, we might take the landscape plan, overlay another layer that has our illustrative tree where the circles are, and make a pretty picture for them to see," says Santiago.

Ultimately, whether it's used to spice up a proposal demonstration or to streamline various aspects of project development, computer-aided landscape design will no doubt play an important role in catapulting AEC/CAD technology into the limelight or, more accurately, into the sunlight.

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SECTION: YOUR MONEY; Pg. 1; ZONE: C

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HEADLINE: VISUAL AIDS;
COMPUTER PROGRAMS LET YOU SEE YOUR HOME DESIGN PLANS

BYLINE: By Antoinette Martin, Knight-Ridder/Tribune.

BODY:

I rotated the baby grand in the blink of an eye. I built a nice Dutch Colonial. Installed electrical circuits. Added a deck with a matching gazebo. And a fountain.

Then, I made the plants grow. Tiny forsythia seedlings-zap!-basking in 8-foot-tall golden glory. A magnolia, just a sapling-instant morph!-towering over the lawn, casting majestic shadows.

What a rush! The new array of home-design software programs are designed to assist in home chores, and that they do.

No need to painstakingly draw and redraw your plans, cracking your brain to get the right scale. You just draw a line with your mouse, holding down a designated key to give you a reading on feet-and-inches.

No need to crunch numbers for your price projections either. Many of these programs have "estimator" functions. First, the program tells you how much wood, and of what sizes, you need for a back-yard fence, and then it tells you how much it'll cost (figuring in required overlap and inevitable waste.)

What follows are some available software programs that I tried out, but first a general note about hardware:

You need a fairly modern computer with a reasonable amount of random access memory and hard drive space to run most of these programs (For IBM-compatible PCs, a 386 or higher microprocessor is required, equipped with Windows 3.1 or higher.) And of course, the CD-ROM disks require the equipment to run them.

- Room design. I tried two in this area: Interiors by Abracadata (\$59.95, Windows; \$99.95, Mac; requires a Macintosh, 1 MB, hard drive recommended, or IBM-compatible PC, 2 MB RAM, 9 MB hard drive space; 800-451-4871), and myHouse by DesignWare (\$59; requires IBM-compatible PC, 4 MB hard drive space; 800-536-2596.)

OK, you have to study the manual first, particularly with myHouse, which lets you create a home, rooms and landscaping in 3D color pictures. But novices can start with sample designs, and then tinker.

Both these programs have extensive libraries of design elements. You click on the picture of a fireplace or a roof and then drag it to where you want to put it on the sample design. Both programs also permit you to design from any view you like, and then click to change perspective.

- Landscaping. Again, I tried two: Landscape by Abracadata (\$59.95, Windows; \$99.95 Mac; requires Macintosh, 1 MB RAM, or IBM-compatible PC, 6 MB hard drive space; 800-451-4871), and 3D Landscape by Books That Work, Broderbund (\$49.95; requires IBM-compatible PC, 4 MB RAM, 15 MB hard disk space (floppy version) or 5 MB hard disk space with CD-ROM drive; 800-242-4546).

Only God can make a tree? Nonsense. 3D Landscape is almost shockingly simple to run. Buttons on the screen let you execute designs simply by pointing, clicking and dragging a mouse. Add trees, shrubs, sprinklers that fit the climate,

soil, water needs you specify, and then click to see how the garden looks on a late afternoon in spring (or a fall morning 25 years from now).

Using Abracadata's Landscape is as stress-free as a summer breeze, too. Plus, the manual is reader-friendly.

- Construction. Landscape Backyard Construction (decks, walkways, borders, gazebos and more), Wiring (simulates and tests circuitry) and Building Material Estimators (calculates materials and costs for electrical, landscaping, interiors, lumber, and attic venting) are all from Books That Work, Broderbund (each is \$24.95 and each requires an IBM-compatible PC with 2 MB RAM, 3 MB hard drive space and 3.5 floppy disk drive; 800-242-4546).

They may not be as elaborate as some users would like-the **Landscape** Backyard Construction will not **blueprint** your projects-but the programs offer step-by-step instructions, with **graphics**, and all manner of handy tips.

The Building Material Estimators permits you to figure out household operating costs, as well as the cost of various projects. If you suspect that area heater is costing you a mint in electric bills, despite the installer's insistence it's the hottest deal around, you can get the cold, hard facts.

Charming extras: the sound of a bird tweeting when you enter the back-yard domain on Landscape Backyard Construction and the animated generator pumping and belching smoke when you run power through circuitry on Wiring.

- Architecture. Planix Home Architect (designs homes; \$99; requires IBM-compatible PC, 2 MB RAM, 5 MB hard disk space, CD-ROM optional) and Most Popular Home Designs (shows existing plans; \$49; requires IBM-compatible PC, 2 MB hard disk space, CD-ROM drive) are both by Foresight Resources Corp. (800-231-8574).

If you're serious about hands-on designing your dream home, Planix can enable you to do it. A little knowledge of building or architecture is a help here. The Planix manual is fat, and there's a great deal to take in. But you don't have to do everything from scratch. Pick a shape similar to the house you want, enter dimensions, and Planix will automatically create a professional-looking plan.

The companion program, Most Popular Home Designs, provides detailed plans-architectural renderings, floor plans and 3D views-for 200 homes. Users may specify the size, style, number of bedrooms and baths desired, then view and print out plans.

You may also "export" plans from Most Popular Home Designs to Planix, and then customize. MPHD works this way with home design programs from some other makers too.

- Home repairs. I tried two very useful programs: Simply House by 4Home Productions (\$59.99; requires IBM-compatible PC, 4 MB RAM, 1 MB hard disk space, 2X CD-ROM; 800-773-5445), and Home Repair Encyclopedia by Books That Work, Broderbund (\$49.95; requires IBM-compatible PC, 2 MB RAM, 2 MB hard disk space, CD-ROM drive-also available on floppy disk; 800-242-4546).

The Home Repair Encyclopedia includes materials estimators for paint, concrete and attic venting. Also, "survival guides" to get the stains out of rugs, furniture and other surfaces; pick the right adhesive for household repairs; find toll-free numbers for products.

Simply House presents a "virtual house," where you enter the front door and "walk through" by clicking in the direction you choose. Hosts "Linda and Bob" appear in small video clips to explain parts of the program; there are more video clips on home repair tasks, more than 100 animations and detailed advice from the Stanley Complete Step-by-Step Book of Home Repair and Improvement.

You may search for info by topic, or via the virtual house. In the bedroom, click on the lamp and it lights up; then you are asked if you wish to read about lighting.

GRAPHIC: GRAPHICGRAPHIC (color): Landscaping, without the sweat.; Source: Abracadata's Landscape.; Chicago Tribune.; See microfilm for complete graphic.

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May, 1995

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HEADLINE: Instant Diagrams

BYLINE: By William Harrel; WILLIAM HARREL, author of CorelDraw 5.0 Revealed (Prima Publishing), is a desktop publisher who often writes about DTP and computer graphics.

HIGHLIGHT: Put Some Pizzazz In Your Message With One of These Six Business Graphics Packages

BODY:

THE RIGHT DIAGRAM WILL MAKE A POINT QUICKLY AND clearly. The wrong one, however, will leave your audience confused.

Typically, businesspeople need to create flowcharts, floor plans, schematics, computer network diagrams, organization charts, and project timelines. If you've ever tried to create any of these in a typical drawing program, such as CorelDraw, you know it can be an arduous task.

Here's where a specialized business graphics program comes in. This is a broad category, with products designed only for organizations charts or flowcharts (see "Flowcharting Software") and others that allow you to create a wide range of diagrams -- everything from a simple organization chart to a complex floor plan. Since most businesspeople often need to generate more than one type of diagram, we cover multipurpose packages here.

Drag-and-Drop Drawing Though the six packages in this roundup take varying approaches, they all have one feature in common: ~~drag-and-drop symbols~~. The basic procedure for creating a diagram is to pick a symbol from a palette or library, drag it into your drawing, draw connecting lines, add some text, and -- just like that -- you've got a diagram. Where these products differ, of course, is in their depth of features, ease of use, and little extras.

In addition to being ~~capable~~ diagramming applications, some of these packages (ClarisImpact, IntelliDraw, and Visio) are also practically full-featured drawing programs, complete with the drawing tools and special effects you'd expect from CorelDraw or Freehand. The other three products (ABC SnapGraphics, Chartist-2, and CorelFlow) concentrate primarily on diagramming tools.

Thrills and Frills Since the purpose of these products is to help you to create the most effective diagrams with the least amount of fuss and frustration, the extras each company puts in the box, such as symbol libraries and clip art, are also important. It's helpful, for example, when creating a computer network to use symbols that look like network servers, printers, and modems rather than boxes and octagons. Similarly, floor plans work better when the desks and file cabinets are easily recognizable.

Most often, you'll find yourself creating diagrams to illustrate a point in a presentation or document, so the ability to work with other programs, including presentation graphics or word processors, is another important factor to consider.

All of these products are reasonably easy to learn and use. And when a package practically does the drawing for you, you should be able to get your point across -- and look good while doing it.

ABC SnapGraphics 2.0

Rating: *** 1/2

WIN

Like presentation packages, most people don't use diagramming software every day. ABC SnapGraphics approaches diagramming by providing features designed to make the program easy to learn and relearn. ABC SnapGraphics supports several different types of charts and diagrams and provides a number of extensive drawing and presentation features.

ABC SnapGraphics supports network diagrams and automatic flowchart shape numbering, and its collection of more than 400 smart shapes (called SnapShapes) is more than many of the other packages reviewed here. Micrografx's Snap technology is the key to this product. SnapShapes automatically resize to text; SnapLines provide automatic line routing and rerouting; and SnapText automatically joins text to lines, so if you move a line, the text moves with it. All of these are well-implemented, intelligent features.

ABC SnapGraphics includes a first-rate online tutorial and quick tour, both of which make the program easy to learn. Another helpful ease-of-use feature is SnapSteps. Similar to Advisors in Harvard Graphics or CueCards in PowerPoint, SnapSteps provide context-sensitive suggestions on diagram design. SnapSteps also advise you on your next step. If you fire up your diagramming software only occasionally, you'll find these tools to be a great help for getting reoriented.

ABC SnapGraphics's template gallery explains how to use the templates themselves, as well as the most appropriate and effective use of various diagrams. Since the package supports 21 chart types, these descriptions are very helpful.

You can link objects to chart shapes -- join notes or photographs to your organization chart on personnel, for example. Another nifty feature is the ability to launch applications by double-clicking on a shape, useful for linking charts to data from a spreadsheet or database.

In addition, ABC SnapGraphics is Microsoft Office compatible. During installation, you have the option of placing ABC SnapGraphics onto the Word and Excel button bars. You can launch the program while working in either application, allowing you to link data or include diagrams in your word processor and spreadsheet documents.

Unlike other packages reviewed here, ABC SnapGraphics does not ship with a wealth of clip art and fonts. It is, however, an excellent diagramming package, one that's especially helpful for the occasional user who needs to create graphics in a hurry. And at a street price of about \$40, it's a great value as well.

Chartist-2
Rating: * 1/2
WIN

Without question, Novagraph's Chartist-2 is a simple program. Perhaps too simple, especially when you consider that it's one of the more expensive packages in this review.

Creating charts in Chartist-2 is merely a matter of clicking on an icon, selecting the icon style, and placing it in your drawing. Connecting chart objects is just as easy: All you do is establish relationships with the connecting tool. The connector scheme couldn't be easier. Instead of selecting connectors based on the type of routing, you use the program's single connecting tool.

The problem is that the program ships with only two symbol palettes (flowcharts and computer networks), though you can create and add your own symbols. Sure, we were able to create simple objects in CorelDraw and import them into Chartist-2, but you shouldn't have to do that much work. Also, the clumsy right-angle connector editor makes adjusting some objects unnecessarily difficult. A difficult workaround called waypoints is your only option, which entails using dummy objects to force the program to wrap right angle lines around existing objects.

Another limitation is Chartist-2's weak alignment tool. Most of the packages reviewed here allow you to align objects in relationship to each other on a grid or specified axis. Chartist-2's alignment tool provides only three options: center, vertical, and horizontal.

Yet another grievance is Chartist-2's intermittently slow performance. As our drawings became more complicated, the program occasionally bogged down, making placing objects and waiting for redraws annoying, though not unbearable.

Such products as CorelFlow and ABC SnapGraphics provide easy access to colors, line styles, fonts, and many other options through intuitive floating palettes. In Chartist-2 you must use archaic dialog boxes that force you to make one change, close the dialog box, and then reopen it if you need further enhancements -- an approach that thwarts trial and error.

Even if you need quick-and-dirty network or flowcharts without much regard for style or customizability, it's hard to imagine Chartist-2 being the solution. Its performance limitations coupled with a hefty price tag put this package at the bottom of the barrel.

ClarisImpact 1.0

Rating: * * * 1/2
MAC

ClarisImpact is a veritable Swiss army knife of business graphics applications. Comprising eight well-integrated modules for diagramming, drawing, charting, presentations, and word processing, it's a business graphics version of ClarisWorks that's just as effective.

The program's diagramming capabilities are among the most extensive in this roundup. To start, select one of several diagram types and define a space on your page to contain it. To expand a diagram, simply click and drag. If you want to add text, just click and type. It doesn't get much easier.

In addition to typical flowcharts, ClarisImpact supports computer network diagrams, organization charts, timelines, calendars, you name it. When creating diagrams, you use a series of shapes, called SmartShapes, that maintain connections and relationships to other objects. Although not as sophisticated as IntelliDraw's clip art symbols, SmartShapes can maintain hierarchical relationships and resize proportionally to one another.

ClarisImpact's other modules are also quite useful, so you don't have to rely on other applications to integrate your diagrams into documents or presentations. The word processing module, for instance, includes tables and outlines. You'll also find an impressive style sheet feature and multiple-page support for creating long documents and reports.

A separate module allows you to compile several ClarisImpact objects into comprehensive and effective reports. The drawing module is substantial and should be adequate for all types of drawings, except for those created by the most advanced professional artists.

Also impressive is the data charting module. To create charts in ClarisImpact, all you do is click on a chart type and enter the appropriate data. The program supports almost every chart style you'll ever need -- bar, pie, and line, among others. What we like about ClarisImpact's chart handling is that it displays the data sheet for setting values directly below the chart. So as you enter data, you see exactly what aspect of the chart you're working on and how your input changes the chart. You can also import data from a database or spreadsheet.

It's difficult to find anything negative to say about ClarisImpact, except maybe its rather high sticker price (the main reason it didn't earn four stars). It's an excellent diagramming package and more -- well suited for just about any business graphics need you can think of.

CorelFlow 2.0
Rating: * * *
WIN

CorelFlow is an adroit, intuitive diagramming package. Unlike IntelliDraw and ClarisImpact, CorelFlow concentrates solely on diagramming, and the list of styles you can create is extensive: landscaping, space planning, electrical, logic, flow, organization, and many others.

CorelFlow's toolbox (and its interface in general) is similar to the products in the CorelDraw suite of graphics applications. Symbols and tools are contained within easy-to-use roll-up palettes; you'll also find the familiar-looking floating toolbox and button bars common in Corel products.

Where CorelFlow differs from other products in this roundup is in its templates. Instead of replacing boilerplate data with your own, the program provides spaces for working with specific types of diagrams. The only help you get from the template is in the palettes containing the appropriate symbols for the type of diagram you're designing. The drawback is that you must still begin drawing on a blank page, which can be intimidating to novices.

Though CorelFlow is a bit complicated, it comes with a thorough manual and a slick tutorial. Once you've mastered it, though, the program is a capable diagramming tool, complete with extensive connecting capabilities that allow you to move and reshape objects, all the while maintaining connections and relationships. CorelFlow is OLE 2.0 compatible, which means it's easy to import diagrams into other OLE 2.0 -- compliant programs, such as Word, PowerPoint, Harvard Graphics, and WordPerfect. CorelFlow also supports several export formats, including EPS and BMP.

You can always count on Corel to provide lots of goodies. CorelFlow comes with 2,000 drag-and-drop symbols, 1,000 clip art images, 1,000 photographs from the Corel Professional Photos library, and 100 TrueType fonts. Most of this may seem like window dressing -- chances are you won't even scratch the surface of the 2,000 drag-and-drop symbols -- but it's good to know there's so much at your disposal.

Missing from CorelFlow, however, are the fancy gradient fills so easily defined in CorelDraw. It would also be nice if the program let you add such special effects as fitting text to path or creating three-dimensional objects -- features that are available in IntelliDraw and ClarisImpact, to name a couple. These limitations aside, CorelFlow is a solid diagramming tool.

IntelliDraw 2.0

Rating: * * * 1/2

WIN // MAC

Whether you need to create simple drawings to embellish reports or draw plans for redesigning the office, IntelliDraw will more than handle the job. The program features a standard draw-program interface, sophisticated technical drawing tools, simple animation capabilities, as well as basic presentation features.

IntelliDraw is flat-out powerful, but you'll have to spend some time mastering all its rich, innovative features. Once you get the hang of it, though, you'll come to love this program. Adobe takes some of the pain out of learning the program with a well-done Getting Started tutorial that covers almost all the program's important features. Also the Windows and Mac versions are identical, so it's easy to distribute your drawings across platforms.

A palette of Action Buttons lets you lock objects on a page, group and ungroup objects, and perform a number of functions that other programs require you to wade through layers of dialog boxes to achieve. IntelliDraw's Toolbox is full of easy-to-use drawing tools. The Connector tool, for example, allows you to draw lines that automatically snap to and connect objects. You can lock, stretch, or rotate them, as well as draw connections at right angles.

Also impressive is the AutoAlign feature. The cursor becomes a pair of crosshairs that follows your mouse as you draw. The crosshairs allow you to align the object being drawn to other objects. AutoAlign also lets you align existing objects in relation to one another. When, for example, two or more objects are exactly centered, the guides form a cross over them.

One of the best things about IntelliDraw is the way it intelligently handles clip art. Changing a pine tree to an oak tree, for instance, takes just a couple of mouse clicks. If you want to change a chair into a sofa, simply stretch its end points. No, you don't get a distorted, elongated chair as you do with other clip art -- the program actually converts the chair to a sofa.

It's innovative features such as these that make IntelliDraw one of the best of the bunch. It's harder to learn than the other packages, but it's worth the effort.

Visio 3.0

Rating: * * * *

WIN

Visio pioneered the concept of drag-and-drop drawing: grabbing a predefined shape from a palette and moving it onto your work space. Three versions later, Visio is still the king of the hill on the Windows platform, ideal for all types of drawings, including floor plans, landscaping, just about anything you can imagine.

Visio is OLE 2.0 compatible, which means you can drag and drop drawings to other applications. In fact, the program links directly to both PowerPoint and Harvard Graphics. Style sheets let you predefine often-used formats, such as text attributes, fill patterns, and so on.

Visio features a healthy collection of SmartShapes, which you can modify to your liking. SmartShapes assume different forms, colors, proportions, and other properties, depending on the drawing context. Each shape has its own data form, or ShapeSheet, which you can edit to modify its behavior. ShapeSheets are small spreadsheetlike forms where you enter formulas that control how the shape reacts when you redraw or move it.

Visio comes with more than 750 predefined shapes, and you can buy several theme collections from ShapeWare, including space planning, landscape planning, and marketing.

One of the truly great features is Visio's SmartConnectors, which make editing your diagrams easier than the process available in any other product. If you move a shape after connecting it with another, the Smart-Connector automatically repositions itself. It even changes its shape to avoid crossing over others that may be in the way.

During installation, you can tell Vision to add a button to the toolbars of Word, Excel, Lotus 1-2-3, AmiPro, or Freelance Graphics. If you want to insert a drawing into any of these applications, simply click the Visio button to launch the program, open the diagram, and it's embedded in your report, spreadsheet, or presentation.

If you're looking for the complete package, Visio is your product. It lets you create attractive diagrams quickly and painlessly and integrates well into today's popular business applications. True, it's the most expensive package in this roundup, but in this case, you get what you pay for.

GRAPHIC: Picture 1, ABC SnapGraphics features an extensive symbol palette within each diagram type; Picture 2, ClarisImpact's eight modules allow you to create everything from project timelines to reports and presentations; Picture 3, You'll be able to sketch everything from **landscape plans** to road maps with CorelFlow's 2,000 drag-and-drop **symbols**; Picture 4, IntelliDraw's collection of smart clip art eliminates the hassle of creating complex diagrams, such as a plan for office space; Picture 5, A robust selection of symbols and connector tools makes Visio the king of the business graphics hill.

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Computer Shopper

March, 1995

SECTION: No. 3, Vol. 15; Pg. 756; ISSN: 0886-0556

IAC-ACC-NO: 16439763

LENGTH: 486 words

HEADLINE: 3D Landscape lets you design the grounds of your dreams; Books that Work Inc's landscaping software;
Software Review; Evaluation; Brief Article

BYLINE: Gilnert, Susan

BODY:

3D Landscape

Books That Work

2300 Geng Rd.

Bldg. 3, Suite 100

Palo Alto, CA 94303

1-800-242-4546; (415) 843-4400

List Price: \$79.95

Requires: 5MB hard drive space for CD-ROM version, 15MB for disk

version; 256-color-capable video card; sound card recommended;

Windows 3.1 or higher.

The 3D Landscape package is part of the Books That Work series--a wonderful, interactive software library that walks you through do-it-yourself projects. Combining video-style graphics, an extensive library of printed material, and PC interactivity, 3D Landscape helps you plan, visualize, and execute a complete landscape project for your home.

The program uses a book metaphor, starting with a table of contents, to guide you through the program's chapters. Each chapter contains topics, such as selecting and buying deck lumber, found on electronic "pages" that follow in sequence. When you start the program, you can choose to enter the Landscape Designer or go to the How To section for specific information on everything from measuring your yard's slope to planting grass seed.

Within the Designer, you can create a yard and view the finished design from any angle--as well as project, over time, how the trees will grow and cast shadows. Basically, you define the lot size and slope; then you click on notebook tabs

to bring up icon palettes for groups of yard elements--trees, shrubs, walkways, and so on. These elements can be moved and resized easily. Click on an icon, and you can then paste it onto your landscape.

Unfortunately, you can design only in Overhead mode. When you want to see a 3-D view, you click on the 3-D icon and move the camera around your landscape. Flipping back and forth is also a bit tedious, especially since the program is not particularly fast at redrawing the screen.

The How-To section provides a wealth of information on every major aspect of landscaping, including step-by-step instructions; animated guidance; and a set of Estimators to help you calculate rough grading volumes, grass quantities, soil improvement, privacy screening, and the amount of concrete required to fill a specific space.

The 3D Landscape program lets you perform text searches for particular subjects and get definitions of technical terms by clicking on words in red type. The program includes more than 30 step-by-step building projects, such as brick patios and retaining walls. You can search the plant database for specific conditions--climate, soil, sun, and water needs--and then filter the list for your climate zone. When you're finished, the Materials Estimator presents a detailed list of supplies required and helps you price them.

If you're looking to spruce up the grounds around your home, and you enjoy the hands-on approach, you may want to postpone that call to the landscape developer and call up 3D Landscape instead.

GRAPHIC: Illustration; Other

IAC-CREATE-DATE: January 24, 1999

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U.S. News & World Report

November 28, 1994

SECTION: NEWS YOU CAN USE; Vol. 117, No. 21; Pg. 115

LENGTH: 517 words

HEADLINE: Hot, powerful and versatile

BYLINE: By Mary Kathleen Flynn

HIGHLIGHT: Best of the lastest

BODY:

All of the programs below are new and hot, or deserve to be. They simplify daily chores, enhance hobbies, educate painlessly -- or give you a good time.

PERSONAL PRODUCTIVITY

Microsoft Office (Microsoft: Windows and Macintosh, CD-ROM version available, \$499). A "suite" of business programs that mesh smoothly, with new versions of Word, Excel spreadsheet and PowerPoint presentation program. Shortcuts can turn "NY" into "New York" as you type.

Sidekick for Windows (Borland International: Windows, \$99). Selling for as little as \$30, the classic DOS scheduler has been updated for Windows. It's still quick and easy.

HOBBIES

3D Landscape (Books That Work: Windows, CD-ROM version available, \$50). Yard plans rendered in lush 3-D graphics. Check for shadows by setting the time of day; watch how trees and shrubs will grow up over the years.

Popular Mechanics New Car Buyers Guide 1995 (Books That Work and Hearst New Media: Windows CD-ROM, \$30). Statistics and photos of 800 vehicles (you can change the color), owner satisfaction survey results, price information like how much dealers pay.

Gift Maker (Maxis: Windows, \$45). Skip the mall and design coffee mugs, baseball caps and T-shirts from the comfort of your own PC. A "service bureau" will work them up.

Picture Window (Digital Light & Color: Windows, \$199). Professional image editing for amateur photographers. Scan photos into your PC (you supply the scanner), then use this program to take out imperfections or modify colors. Print them out on a color inkjet printer, or send them on a disk to a servicebureau for high-quality prints.

The Greatest Paper Airplanes (KittyHawk Software: Windows, \$30). Aviation history and folklore plus animated step-by-step instructions for 25 designs you print out and fold along the lines.

GROWN-UP DIVERSIONS

It's a Wonderful Life (Kinesoft Development: Windows CD-ROM, \$80). Scroll the script scene by scene while watching the entire Christmas movie classic.

Space Simulator (Microsoft: DOS, \$50). Flight Simulator takes to outer space. Pilot the space shuttle from liftoff to orbit, fly the lunar lander down to the surface of the moon.

Monty Python's Complete Waste of Time (7th Level: Windows CD-ROM, \$60). Pythonites snicker even at the mention of lumberjacks, argument clinics, cheese shops and dead parrots. This silly disk has them all, plus screen savers and games.

KICKS FOR KIDS

SimTown (Maxis: Macintosh CD-ROM, \$45). Want to build a village -- and then run it? Maxis took its trademark SimCity program and scaled it down for children ages 8 to 12, with bigger graphics and simpler rules.

What's the Secret? (3M: Windows and Macintosh CD-ROM, \$60). The hows and whys of bees, roller coasters and other phenomena are explained in this science program via PBS video clips and clever experiments. For children ages 8 to 12.

Math Workshop (Broderbund: Windows and Macintosh CD-ROM, \$40). Playful math activities, like estimating the length of a ruler in peas and rotating shapes to assemble a puzzle. Ages 6 to 12. -- M.K.F.

GRAPHIC: Pictures: No caption (Photos: Jeffrey MacMillan -- USN&WR)

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Newsbytes

November 4, 1994, Friday

LENGTH: 1612 words

HEADLINE: Feature - Landscaping by Computer

DATELINE: MINNEAPOLIS, MINNESOTA, U.S.A.

BODY:

(NB) -- By Susan Bryan. How easy is it to design your own landscape on computer? Depends on the software. Six different programs are available, ranging in price from \$14.95 to \$89.

All six let you plot your lot and move pre-fab graphics around by clicking and dragging. Graphics vary in style and number. At the low end, Autodesk Landscape includes 50-symbols, all line drawings. 3D Landscape tops the list with 100 realistic color pictures. But no package covers every-possible-object. You'll find yourself substituting a planter box for a compost bin before you're finished.

Some of these programs measure more precisely than others, but none saves you the task of sizing up your existing landscape with an old-fashioned tape measure.

Beyond that, each program is different. A couple are little more than fancy drawing tools. People who do everything by computer will enjoy nerding around with them. But turning cute graphics into a growing landscape takes more know-how than these programs offer.

If you're serious about doing it yourself, you only need to consider two programs: LandDesigner from Green Thumb Software and 3D Landscape from Books That Work. Why? Because these programs tell you the real-life consequences of your plans as you plot them on screen.

LandDesigner by Green Thumb Software (\$89). If you're designing a sprinkler system, buy this program. It's got enough valve and pipe symbols to plot the waterworks at Versailles. And it's one of the only programs that will test your irrigation system before you buy pipe, much less buy it (3D Landscape does this as well).

LandDesigner's biggest drawback? All symbols are two-dimensional and cannot be sized. You'll need to imagine real trees where circles mark your plan. And you'll need to imagine how tall each tree will be when it reaches maturity. In other words, you'll have to read a flat plan like a pro.

And don't count on help selecting plants. LandDesigner's list is so small that it's almost useless. You can increase its power by adding another 300 plants for \$19.95. As is, most searches for a plant with specific attributes come back at you with a blank screen.

Computer novices will appreciate the manual written in plain English. Step-by-step instructions begin with rock bottom basics on using a computer mouse. The program is easy to learn because it's simply a drawing tool with a few bells and whistles.

Essentially, you're getting a computerized version of a blueprint topped by 12 tissue-paper overlays. You draw on each layer separately, but you can see as many layers as you want simultaneously. You can plot your lot and house on one level, then make notes on another about use of space. Trees might go on a third layer. Graphics move easily from one layer to another, with the exception of water works--which are locked into their own level.

3D Landscape by Books That Work (\$79.95). If you're interested in designing more than a sprinkler system, buy 3D Landscape. You get a spiffy design tool plus on screen how-to's that explain nitty-gritty details of installation. This

down-to-earth program goes further than any other in helping you really do it yourself. It's also the only one capable of dealing with a sloping lot.

The only irritating features are icons so small they're almost illegible and the absence of a free-hand drawing tool. To make curved borders and beds, you select a straight line, then tediously pull and push points along it into curves.

With 3D Landscape, you design in two dimensions, then look at plans in 3D from any angle you choose. Realistic growth and shadow features let you foresee how plants will grow--and transform sunny spots under saplings into the dense shade of mature trees. Shadow patterns can be viewed over the course of a day or year. Predicting sun and shade are crucial to successful landscape design. But only 3D Landscape gives you enough computer magic to cope.

3D Landscape also has the only plant library worth its kilobytes. With more than 400 plants in its memory banks, this program won't come up empty-screened when you ask for a sun-loving tree for clay soil in US Hardiness Zone 9. Each plant is described with maintenance notes. Anyone who has cleaned up inedible fruit dropped by a flowering beauty knows to look at care first, appearance second. But this plant library is the only one that warns you about such chores.

The on-screen how-to book is fun as well as informative. Complex information is explained by animations complete with sound effects. You can see exactly how to measure a slope, transplant a shrub, or break up old concrete. Interactive pages with on-screen calculators help you estimate the volume of cut and fill for rough grading or the height plant you'll need to screen an eyesore. You even learn what tools to rent for big projects.

All in all, this program gives you twice as much as any other on the market.

Landscape by Autodesk (\$69.95). Precision is the virtue of this program. Designers accustomed to CAD, or computer-aided-design, will catch on immediately. But the arcane details of the program will frustrate non-CAD users and frazzle amateurs.

The manual is written in clear enough prose. But it's 242 pages and you do need to read it. There's no cross-over computer logic here. (A rotating menu system at the side of the screen shifts every time you select a topic. If you're used to stationary, pull-down menus, you'll get dizzy trying to keep up with what's where.)

Instead of selecting trees and shrubs by name, you choose outline symbols, then specify a height and diameter for them. The program enters the actual measurements, but prints out your plan in a choice of scales.

Once you've got your design snapped to grids in two dimensions, you can look at it in 3D perspective from any angle. You get a color line drawing, not a realistic picture.

This is a design tool, pure and simple. It assumes you'll hire someone else to install your landscape and advise you on plant selection.

Design Your Own Home Landscape by Abracadata (\$59.95 Windows & DOS versions, \$99.95 Macintosh). This manual talks to computer buffs, not beginners. Even the tutorial file was omitted from the Windows version I tested. If you don't know what it means to flush your buffers, stay away from this one.

Computer sophisticates may not find the program so onerous. Plants can be aged by any number of years you choose. If you buy an extra \$60 program called Design Estimator and create your own materials files, you can calculate how much your total job will cost. There's also a nice tool for drawing arcs that avoids the tedium of connecting dots until they form curves. But icons are often cryptic. (To lower your frustration level, I'll give you a tip: the plant library is hidden behind the picture frame icon.)

Landscape Designer by Advantage Point (\$39.99). Plot your landscape in two dimensions, then switch to three dimensions and watch the colors and shapes change through the seasons. Deciduous trees grow leaves, then shed them. Bulbs pop out of the ground, then die back into the lawn.

This showy program is more computer animation than design tool. A lot of energy went into giving you subtle color options on screen. That left little flexibility elsewhere.

Plants can be grown to mature heights--but only if they're one of the chosen few built into the program. Your choices are limited to 18 big trees, 13 ornamental trees, and 37 shrubs.

What's worse, this program limits you to a squared-off/rectilinear lot no larger than 150 by 150 feet. If you've got a curve in your boundaries, you're out of luck. Part of the squared-off inflexibility comes from the 3D set-up. You view your lot from its corners, not from the front, back, or sides.

The manual isn't difficult to understand. But once you learn the basics of the program, you'll be frustrated by its limitations.

Landscape by Expert (\$14.95). This one takes the least time to learn. But it does the least for you. It's a simple drawing tool with a two-dimensional, top-down view only. There's little expertise built into the system.

The Plant Encyclopedia is too vague to be useful. Look up a plant and you'll get an undefined hardiness zone number plus a recommended climate such as West Coast. (Does that mean the plant is suitable to rainy Seattle as well as water-starved L.A.?)

People who know little about plants should stay away from this one. Or use it to noodle around a bit on your own.
Then hire a pro to correct your plans and recommend plants.

Buying Tips: Before you buy any of these programs, make sure your computer has enough power to run it. If your hardware isn't up to speed, these elaborate programs will run so slowly that you'll find them more frustrating than fun.

Check that your printer connects with the software, too. Some programs can print out extra-wide sheets when hooked up with the right printer, either yours or one at a **graphics** shop. If you've designed an elaborate **landscape**, you'll want to print out **plans** larger than 8 1/2 X 11.

(Susan Bryan/19941104/Contacts: Books That Work at (800) 242-4546; Green Thumb Software 75 Manhattan Drive, Ste. 100, Boulder, CO 80303 1 303 499-1388; Abracadata, Ltd. PO Box 2440, Eugene, OR 97402 1 800 451-4871; Advantage Point is distributed by Gametek, Inc., Gametek is a registered trademark of IJE, Inc. 2999 Northeast 191st St., Ste. 500, North Miami Beach, FL 33180; Expert Software PO Box 144506, Coral Gables, FL 44114-4506 1 800 759-2562)

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October, 1993

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LENGTH: 1443 words

HEADLINE: Pencil and computer compared in park design project.

BYLINE: Puterbaugh, Phil

BODY:

-NESTLED in the eastern foothills of the Rocky Mountains, near the base of Pikes Peak, lies Peregrine Park, a 5.9-acre neighborhood park on the northwest side of Colorado Springs. Design of this park was one of the most exciting projects I have had during my 19-year stay at the Colorado Springs Parks and Recreation Department.

As a ~~drafter/illustrator~~ for the department, my usual mission on such a project is to prepare all the park development construction drawings on our CAD system. But my role this time was different. I had recently expressed to my superiors a desire to become more involved in design. I had experience in architectural and civil engineering design and had been exposed to the landscape designs of others in the department. So on this project I was granted a significant amount of the design responsibility; in fact, more than I had anticipated.

The first thing I had to design was the playground for the park, and I soon realized that I had a problem. Before I came to the parks and recreation department in 1973 I had never had a computer with a CAD system. All my previous work had been done using conventional pencil and paper techniques. Since I had been at the parks and recreation department, most of the design work was landscape design and was always done by our landscape architects. So even though I had been drafting on CAD for years, I had not yet had the experience of designing on CAD. So my dilemma was this: Should I design on paper first, as I had done in the past, and then draft my design on CAD, or should I go ahead and design directly on CAD?

Pencil First?

I have heard some designers say that they like drafting in CAD, but would rather design in pencil first. I have wondered if they were speaking from the position of a person who had tried it both ways and had made this decision on that basis, or if the decision was based more on resistance to change. I then wondered if I was considering doing the design on paper because I was resistant to change, or because I actually thought it would be easier.

On the Peregrine Park playground design I decided to put the comparison to a test and try it both ways. My first design was done in pencil on sketch tissue. I drew the design elements (the shelter, the individual pieces of playground equipment, and lines indicating necessary clearances around the equipment) on separate pieces of tissue and maneuvered them around until I had what looked like a meaningful layout. Then I refined the design by using layers of tissue to "pull through" good aspects of the design from lower layers, and then drew changes to each progressive layout on the top layer of tissue. This is pretty standard design practice and my usual style, but in the end the process would prove by comparison to be cumbersome and time consuming, and I was not particularly happy with the design.

Then I tried it again, this time drawing the design elements on CAD. The benefits were numerous.

* Everything was easily visible and I did not have to squint to see through layers of tissue.

- * I did not have to discern between scribbled lines and decide which one to keep.
- * Any element or group of elements could be rotated without shifting other elements that were to stay stationary.
- * Everything stayed in place once it is moved.
- * I did not have to deal with all those layers of tear-prone tracing tissue and drafting tape.

The process went quickly and easily, with all elements located with absolute accuracy. I felt I had a good design with no tearing tissue, no taping, and no graphite on my hands and shirt sleeves.

Since making the comparison, I decided that for my own preference, where simple drafting is concerned, of course, I would rather draft on CAD than in pencil whenever possible. Where design is concerned, it can depend. When developing a broad concept, pencil design can have its merits over CAD, but when it comes to the nitty-gritty of actually putting design elements that have dimension together, CAD is decidedly the way to go for me.

One factor that made this playground design particularly challenging was the Americans with Disabilities Act of 1990, which requires public facilities--playgrounds included--to be accessible to all disabled persons, including those in wheelchairs.

Quick Approval

The playground design had to be approved by all the neighbors of Peregrine Park before being finalized and made part of the construction plans. A neighborhood meeting was arranged at the elementary school next door to the park. I presented the plan and was pleased that there were no requests for changes to the design.

Next, I had to design the planting plan for the park. This was no special feat in terms of CAD design, especially with the LANDCADD software (LANDCADD International, Inc., Englewood, Colorado) we are using, because it has so many landscape architecture related commands and symbols. The challenge was in creating a meaningful planting plan using the principals and practices that landscape architects use: selecting trees appropriate for this climatic zone and considering their general hardiness, their water and soil needs, their shape, their spring and fall flower colors; spacing appropriate for easiest mowing; and the utilitarian purpose intended for each tree's specific location, such as shade, windscreens, visual effect, etc.

In the two shrub beds in the playground area, small ornamental trees were used to provide visual esthetics and shade in the playground area, evergreen shrubs were used for fall color, and thorny barberry shrubs were used as barrier plantings to discourage entry into the shrub beds.

There was a great deal of political pressure in our community during this project for us to complete the construction plans as soon as possible, so many processes had to be overlapped. While sometimes this helped things move faster, other times it caused problems.

One major problem we encountered was with the grading plan. Once the site development plan was complete, the project landscape architect prepared a grading plan and sent it to a consultant for cut and fill calculations. In the meantime, I was completing other plans in the set of drawings. Then the consultant returned the earthwork calculations, showing that we had an excessive amount of earth to be imported. This happened on a Friday and the plans were due at our city purchasing department for bidders at 8 a.m. on the following Monday morning, so we quickly had to find a way to balance the site.

If the project had been drafted manually, I would have been faced with the task of erasing and redrafting the location of these play fields, along with any related labels, notes, and dimensions on every plan in the set. Had that been the case, I do not believe I would have made my deadline. But on the CAD system I had all the plan sheets (as opposed to detail sheets) layered in a single drawing file. The file was structured so that any change I made on one plan would automatically be reflected on the other plans, in this case, the play field shift.

In the layering structure I like to use, all layer names end with a dash, followed by a suffix. The suffix identifies the sheet or sheets on which the layer will appear:

- A --All Sheets.
- D --Demolition Plan.
- E --Existing Site Plan.
- S --Site Development Plan.
- L --Layout (dimensioning) Plan.
- G --Grading Plan.
- I --Irrigation Plan.
- P --Planting Plan.
- DE--Demolition Plan and Existing Site Plan.

-SLGUIP--Site Development Plan, Layout Plan, Grading Plan, and Utilities Plan. This suffix is common for all proposed entities that will appear on those plans that reflect proposed conditions.

With this system, if I want to view the grading plan, I would first turn off all layers, using the asterisk wildcard to specify all layers. Then I would use the asterisk again to indicate the following layers to turn on: *-A, *-G, *-SLGUIP. With this layering system, the changes went quickly and were completed by deadline.

Under certain circumstances on some projects a degree of manual drawing will occasionally be necessary despite CAD, such as when you need to make minor changes to an already existing hard copy plan. But after experiencing CAD as the normal course for producing our construction plans for building parks, I would find it hard to ever go back entirely.

In utilizing our AutoCad (AutoDesk, Inc., Sacramento, California) and LANDCADD software to prepare our construction plans, we experienced better productivity, information organization, accuracy, and drawing neatness, all the while meeting tight deadlines.

GRAPHIC: Map

IAC-NUMBER: IAC 14604379

IAC-CLASS: Trade & Industry

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MacWEEK

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LENGTH: 160 words

HEADLINE: Mum's the Word helps gardens grow; garden design software from Terrace Software; Product Announcement

BYLINE: Said, Carolyn

BODY:

By Carolyn Said

Medford, Mass. -- You don't get the feeling of the earth under your fingers and the sun on your back, but you can design your garden on your Mac with Mum's the Word Plus from Terrace Software.

Available for \$165, the combined plant database and ~~landscape~~ design software lets professional and amateur landscapers ~~plan~~ their garden using ~~plant and landscape symbols~~, plant information, and object-oriented **graphics**.

It ships with a database of more than 600 perennials, shrubs, trees, grasses, herbs, ground covers and annuals. Plant information covers appearance, propagation, season of bloom, uses, drought tolerance and sources. The program also comes with more than 100 **landscape symbols**, including ~~plan~~ and elevation views of trees, shrubs, flowering plants and **landscape** features.

Upgrades from the original Mum's the Word are \$50.

Terrace Software is at P.O. Box 271, Medford, Mass. 02156. Phone (617) 396-0382.

SIC: 7372 Prepackaged software

IAC-NUMBER: IAC 11432921

IAC-CLASS: Computer; Trade & Industry

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LENGTH: 182 words

HEADLINE: New CAD symbol library to ship; modules contain 2,400 symbols; product announcement

BYLINE: Lehman, Cliff

BODY:

New CAD symbol library to ship; modules contain 2,400 symbols

Evergreen, Colo. -- Advanced System Design Inc. has announced that its new CAD symbol library for use with ClarisCAD and MacDraw II will ship this month.

ASD Professional CAD Symbol Library 2.0, which was developed using ClarisCAD, is a collection of more than 2,400 architectural, mechanical, electrical and electronic symbols grouped in modules according to use. The new \$119.95 library is based on the company's ASD Cabinet Symbol Library.

The General Architectural module of the new library contains symbols for doors, windows, appliances, fixtures, as well as electrical, landscape and site plan symbols.

The Hardware Store module contains machine and cap screws, nuts, washers and other symbols.

A general Electronics Shack module includes a variety of electronic design and printed circuit board aids.

Professional CAD conforms to American National Standards Institute and other standards.

Advanced System Design Inc. is located at 1010 Stagecoach Blvd., Evergreen, Colo. 80439; (303) 674-2222.

GRAPHIC: Photograph

SIC: 7372 Prepackaged software

IAC-NUMBER: IAC 07101158

IAC-CLASS: Computer; Trade & Industry

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